

Title (en)  
SEMICONDUCTOR MEMORY DEVICE

Publication  
**EP 0194939 B1 19920205 (EN)**

Application  
**EP 86400504 A 19860311**

Priority  
• JP 4935085 A 19850314  
• JP 5466685 A 19850320

Abstract (en)  
[origin: EP0194939A2] A semiconductor memory device of multi-bit type which produces plural output signals (O<sub>1</sub>, ..., O<sub>8</sub>/sub>) corresponding to read-out data from one address at a time including memory means for storing data. In a plurality of output buffer stages for producing the output signals, the operation of the output buffer stages is based upon at least a timing signal. Means (151, ..., 158) for operating the output buffer stages have predetermined time differences. The output signals (O<sub>1</sub>, .. O<sub>8</sub>/sub>) having predetermined time differences are delivered from the output buffer stages.

IPC 1-7  
**G11C 7/00**

IPC 8 full level  
**G11C 7/10** (2006.01); **G11C 7/22** (2006.01)

CPC (source: EP KR US)  
**G11C 7/1051** (2013.01 - EP US); **G11C 7/1057** (2013.01 - EP US); **G11C 7/106** (2013.01 - EP US); **G11C 7/22** (2013.01 - EP US);  
**G11C 11/34** (2013.01 - KR)

Citation (examination)  
US 4635234 A 19870106 - YAMAGUCHI TAKASHI [JP]

Cited by  
EP0316082A3; EP0686975A1

Designated contracting state (EPC)  
DE FR GB

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**EP 0194939 A2 19860917**; **EP 0194939 A3 19881221**; **EP 0194939 B1 19920205**; DE 3683783 D1 19920319; KR 860007744 A 19861017;  
KR 910000876 B1 19910211; US 4802127 A 19890131

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**EP 86400504 A 19860311**; DE 3683783 T 19860311; KR 860001865 A 19860314; US 19677288 A 19880518